



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0280231

THE APPLICATION OF MAVERICK DISPOSAL, L.L.C. FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, SHERROD SWD LEASE WELL NO. 1, GARDEN CITY, W. (WOLFCAMP 7880) FIELD, GLASSCOCK COUNTY, TEXAS

HEARD BY: Andres J. Trevino P.E., Technical Examiner
Terry Johnson, Hearings Examiner

APPEARANCES:

APPLICANT:

Clay Nance
Blade Van Staven
Tye Orr
Donald Bugg
Gary Rogers
Chris Boren
Larry Carlisle
Delaney McCaghren

REPRESENTING:

Maverick Disposal, L.L.C.

PROTESTANTS:

John Soule
Randy Poston

MTN Energy, Inc.

PROCEDURAL HISTORY

Application Filed:	October 3, 2012
Request for Hearing:	November 14, 2012
Notice of Hearing:	February 7, 2013
Date of Hearing:	March 6, 2013
Date Transcript Received:	March 20, 2013
Proposal For Decision Issued:	September 9, 2013

EXAMINERS' REPORT AND PROPOSAL FOR DECISION**STATEMENT OF THE CASE**

Maverick Disposal, L.L.C. (Maverick) requests authority pursuant to Statewide Rule 9 to operate Well No. 1 on its Sherrod SWD Lease in Glasscock County as a commercial disposal well. The application was declared administratively complete by Doug Johnson, Manager for Injection of the Storage Permits and Support Section of the Commission on December 19, 2012. This application is protested by MTN Energy, Inc. MTN Energy, Inc. owns and operates a competing commercial disposal well approximately one mile west of the proposed disposal well. Maverick raised an objection as to whether MTN Energy had standing to protest. Under 16 TAC 3.9 (5) (E) (ii), "affected person" means a person who has suffered or will suffer actual injury or economic damage other than as a member of the general public or as a competitor, and includes surface owners of property on which the well is located and commission-designated operators of wells located within one-half mile of the proposed disposal well." Because MTN Energy stated it was protesting the application because the proposed disposal formation, the San Andres, is over-pressured, the objection to standing was overruled.

DISCUSSION OF THE EVIDENCE**Applicant's Evidence**

The subject well is currently a plugged dry hole that was drilled and plugged in February 1998. The well was drilled to a depth of 7,780 feet to test the Wolfcamp formation. The well has 400 feet of 13 $\frac{3}{8}$ " surface casing cemented with 450 sacks of cement circulated from the casing shoe to the ground surface. The well has an intermediate string of 8 $\frac{5}{8}$ " casing set at depth of 2,946 feet cemented with 800 sacks of cement circulated from the casing shoe to the ground surface. Maverick will reenter the well and set 5,050 feet of new 5 $\frac{1}{2}$ " casing. The 5 $\frac{1}{2}$ " casing will be cemented with 860 sacks of cement circulated from the casing shoe to the ground surface. (See Wellbore Diagram attachment). The Commission's Groundwater Advisory Unit recommends that usable-quality ground water be protected to a depth of 375 feet. The GAU further identifies the base of the underground sources of drinking water (USDW) as being estimated to occur at a depth of 1,100 feet.

The proposed injection will be through 3 $\frac{1}{2}$ " tubing set on a packer at approximately 3,440 feet, but no higher than 100 feet above the top of the injection interval. The proposed injection interval is the San Andres formation, the top of which is expected to occur at about 3,540 feet. The proposed injection interval is between 3,540 and 4,746 feet. The injection interval will be selectively perforated through out the interval across zones believed to have sufficient porosity and permeability to accept the disposal fluids. The depth of the San Andres is based on the log of the BTA Oil Producers - 9703 JV-P Hightower Well No. 2, the proposed disposal well. The proposed disposal well was

renamed to the Sherrod SWD No.1 to reflect the new lease obtained from the surface owner, Jimmy Sherrod. The proposed maximum injection volume is 20,000 BWPD, with an estimated average of 10,000 BWPD. The proposed maximum injection pressure is 1,770 psig.

There are no wellbores within a $\frac{1}{4}$ mile radius of the proposed disposal well. There is a permitted drilling location for the BTA Oil Producers, LLC 9703 JV-P Hightower Well No. 6. The drilling permit is scheduled to expire on June 28, 2014.

The proposed site is located off Highway 158, the main through fare for trucks servicing area drilling. The proposed facility is near the Apache Field Office and the Rogers Construction and Trucking yard. Apache anticipates sending 5,000 to 7,500 BWPD of produced lease water through flowlines to the proposed disposal well. Rogers Trucking anticipates sending 5,000 to 7,500 BWPD of frac water by truck to the proposed disposal well. The proposed facility will consist of a 5-acre location pad on the 108.3 acre lease tract. The proposed facility will contain six 500 bbl saltwater storage tanks, two 750-bbl gun barrel separators, two 300-to 500-bbl oil tanks, one 5,000-bbl settling pit and an injection pump. All tanks will sit inside a secondary containment basin. A secondary concrete containment wall approximately three feet high will surround all tanks to contain any spills. The secondary containment system is designed to contain 100% of the volume of all tanks within the secondary containment system. All surface areas that are expected to handle fluids will be constructed in accordance with the Commission's requirements for commercial disposal facilities and designed to prevent pollution. The disposal fluids will be unloaded into a concrete trough. The fluids will flow to the 5,000 bbl concrete settling pit where any solids will settle and remain in the pit. The fluids will be treated with various chemicals to prepare the fluids for disposal. An application for the pit is currently under review by Commission personnel. From the pit, fluids will be pumped to the gun barrel to separate any oil from the disposal fluids. Any oil recovered will be pumped into the oil tanks. The remaining water will be transferred into the saltwater storage tanks where it will then be pumped down the disposal well. The entire location pad will have a built-up caliche or limestone rock base. The pad is large enough to accommodate numerous trucks on the property without the need to have trucks parked and waiting along the Highway 158 to off-load disposal fluids. At other area disposal facilities trucks often wait along county roads to enter the disposal facility to unload their fluids. Trucks will enter the facility off Texas Road 158 onto the property. Maverick will comply with all the standard provisions found in a commercial disposal permit designed to prevent pollution from activities associated with the surface facilities.

The Applicant's expert engineering witness, Larry Carlisle, performed a pressure front calculation to determine what affect the proposed disposal well will have on the reservoir pressure at the MTN Energy's disposal well. The calculation was performed at the maximum rate, at a distance of 4,943 feet, the distance to the MTN Energy's commercial disposal well, the Schwartz SWD No. 1D for a period of 25 years. The San Andres formation is expansive in size and is found throughout the Permian Basin in west Texas. It extends into New Mexico and is considered an infinite-acting, unbounded

reservoir. The expert calculated the current bottom hole pressure is 1,894 psi at the MTN Energy's disposal well's location. For the calculations, the expert assumed the San Andres formation is an infinite unbounded reservoir, with 38 md permeability, 11.7% porosity, 400 feet of net reservoir thickness and an injection rate of 20,000 BWPD. After injecting 20,000 BWPD for 25 years, at the distance to MTN Energy's disposal well, the reservoir pressure is expected to increase by 20 psi. The expert made a second calculation assuming a 10% decrease in reservoir permeability at 34 md and a 10% decrease in porosity at 11%. The second calculation shows the proposed well will increase the reservoir pressure by 76 psi at the MTN Energy's disposal well after 25 years of injecting at the maximum rate of 20,000 BWPD. The Applicant alleges the proposed disposal well will have minimal effect on the reservoir and the MTN Energy's disposal well.

The Applicant's expert engineering witness performed a water displacement calculation to determine the distance the injected water will invade the reservoir at different periods of times in the future. The calculation assumed piston-like displacement, 400-foot net thickness, 11.7 % porosity and injection at the maximum rate of 20,000 BWPD. The results of the calculations show that after 25 years of injecting at a rate of 20,000 BWPD, the invaded radius will be 2,641 feet or ½ mile. The invaded acres will be approximately 503 acres centered around the proposed disposal well. The Applicant alleges the proposed disposal well fluids will not adversely effect either the reservoir or MTN Energy's disposal well.

The Applicant's expert reviewed the Commission's records regarding MTN Energy's commercial disposal well, the Schwartz SWD No. 1D in the Hightower (Wolfcamp) Field. The records indicate the permit was issued on April 21, 2010 for 10,000 BWPD. One month after the well began injecting the permit was amended to double the volume of authorized disposal fluids to 20,000 BWPD on March 20, 2012. Further, the H-10, Annual Disposal Well Monitoring Report, for the Schwartz SWD No. 1D shows a constant average injection pressure of 1,050 psig and a constant maximum pressure of 1,250 psig from February 2011 through January 2012. The Applicant's expert alleges if the San Andres was over pressured, MTN Energy would not have requested the doubling of volume of authorized disposal fluids going into the Schwartz SWD No. 1D.

Maverick plans to use the proposed well to dispose of produced water and frac water generated as a result of the active and future development of the new Wolfberry vertical play and the Wolfcamp horizontal play in Glasscock County. A market study conducted by Maverick shows nine million barrels of oil are produced annually in Glasscock County. Maverick estimates 45 million barrels of water will be produced in association with the oil and will require disposal. The Wolfberry vertical wells and the Wolfcamp horizontal wells, both require large, multi-stage fracs that use large quantities of water. The wells later produce the frac water which requires disposal. Maverick believes that additional disposal facilities are necessary to accommodate the active drilling as current commercial wells in the area are at capacity, requiring trucks to wait to unload fluids. Maverick presented a W-1, Drilling Permit Query from the Commission's online system showing over 600 new drilling permits issued from August 2012 through March 1, 2013 in Glasscock County. IHS Activity data shows the Commission has issued 875 drilling

permits in Glasscock County in the last twelve months. Maverick believes their facility is necessary to accommodate ongoing and active drilling occurring in both plays. There are approximately seven commercial wells within 10 miles of the proposed disposal well. All disposal well sites constantly experience wait times. Representatives from area trucking and oil service companies testified on the great need for additional, reliable disposal capacity. Maverick believes that the location of the proposed well in an area with increasing demand will reduce wait times at all disposal facilities, which results in reducing disposal costs for the operators.

Maverick Disposal, L.L.C. has an active P-5 on file with the Commission, with \$25,000 financial assurance. There are no past or pending enforcement actions against Maverick Disposal, L.L.C.

Notice of the subject application was published in the *Big Spring Herald*, a newspaper of general circulation in Howard, Glasscock, Martin and Dawson Counties, on December 2, 2012. A copy of the application was mailed on September 27, 2012 to the Glasscock County Clerk's Office and the offsetting surface owners and operators within ½ mile of the proposed well. Jimmy Sherrod owns the surface of the 108.3 acre tract on which the well is proposed.

Protestant's Evidence

MTN Energy agrees with the Applicant that additional disposal capacity is needed in the area. MTN Energy is protesting the use of the San Andres as a disposal formation. MTN Energy operates 18 commercial disposal wells through out the State, including two in Glasscock County. The Schwartz SWD No. 1 was the first disposal well MTN Energy acquired. The MTN Energy's Schwartz SWD No. 1 is located less than one mile to the west of Maverick's proposed disposal well. On March 20, 2012, MTN Energy applied for, and was issued, a disposal permit amendment to double the volume of fluids it is authorized to inject. After the amendment was approved, MTN increased the size of the surface pumps and surface facilities to handle the increased volume. To insure the well would be able to handle the increased volume, MTN elected to increase the perforations in the well within the permitted interval. During the recompletion process, MTN encountered problems of injection water flowing back to the surface. The flow back water included oil and is believed to be previously injected water. The injection rate, pressures, and volumes were recorded for the Schwartz SWD No. 1 from June 2012 until March 1, 2013. Immediately after the work over, on January 19, 2013, the injection pressure dropped to 320 psi, but when the disposal volume was increased to 8,000 BWPD, the pressure increased to 1,200 psi. The data indicates the Schwartz SWD No. 1 can only inject at a rate of 8,000 BWPD at a pressure of 1,200 psig. MTN Energy provided injection volumes for the Schwartz well that indicates MTN Energy has injected 4.55 million barrels of water into the San Andres. At other MTN facilities located 50 miles away near Midland, MTN Energy has experienced similar pressure build ups and communication issues with disposal wells within one mile of MTN Energy's disposal wells. For these reasons MTN Energy believes the San Andres is "filled up" and should not be used for new disposal.

During the cross examination of the Protestant, the Protestant testified that during

the recompletion of their well, mud was used and estimated they only recovered approximately 95%, leaving 5% in the formation or well. When asked by the examiners what he estimated the current bottom hole pressure is in the San Andres formation at the MTN wellsite, he replied 1,972 psi. The W-2 filed with the Commission indicates the well is perforated from 3,606 feet to 4,124 feet.

EXAMINERS' OPINION

The examiners believe that this application should be approved. The Sherrod SWD No. 1 will be completed in a manner which will confine disposal fluids to the proposed disposal interval in the San Andres. Surface casing is set and cemented through the base of usable quality water. An intermediate casing is set at a depth of 2,946 feet with cement circulated to the surface. The longstring production casing will be set at a depth of 5,050 with cement circulated to the surface to prevent migration from the injection interval. There are no oil or gas wells within the ¼ mile radius of review that will have the potential to serve as conduit for injected fluids to reach the base of the usable quality water.

The evidence does not support the conclusion that the proposed disposal formation, is over-pressured. The Protestant's own testimony indicated the bottom hole pressure in their well is only 1,972 psi, nearly what a normal pressure gradient is expected for a well perforated from 3,606 feet to 4,124 feet. The Protestant's perceived over pressure of the San Andres could be caused by operational issues with MTN Energy's own disposal well. Initially, the well was perforated from 4,024 feet to 4,134 feet, giving it only 110 feet of disposal interval to inject into. A smaller interval would require higher pressure to inject the same volume of water than a larger interval. The interval was later expanded to the interval from 3,606 feet to 4,124 feet.

The protestant stated they did not recover 100% of the mud from the well during the workover. Any mud left in the well may be injected into the formation causing it to clog up the pores and increasing the required pressure to inject. The flowback water that was identified by the Protestant as water that was previously injected contained oil and mud. If the Protestant was injecting more than minimal quantities of oil into the disposal zone, oil could carry fine particles into the formation and cause clogging of the pores which in turn increases surface disposal pressures required to inject fluids.

The Protestant's well is using a smaller diameter tubing (2 $\frac{7}{8}$ ") than the average-sized diameter tubing (3 $\frac{1}{2}$ ") for a high volume commercial disposal well. Maverick intends to use a 3 $\frac{1}{2}$ " tubing as other commercial disposal well operators, such as Basic Energy. The smaller the tubing size, the higher the fluid friction losses, the higher the surface injection pressure that is required to inject fluids into the disposal zone. Engineering calculations performed by Maverick's expert demonstrate that the Maverick disposal well will not significantly increase the reservoir pressure or invade the pore space at the MTN well. After injecting 20,000 for 25 years it is estimated the reservoir pressure will only increase by 20 psi. The invaded fluids will only reach half the distant to the MTN well after 25 years of injection. The Protestant did not challenge these calculations. The San Andres is considered an infinite-acting unbounded reservoir that is found throughout the Permian Basin in West Texas and extends into New Mexico. It would be highly unlikely for the MTN

well to fill up the reservoir after injecting only 4.55 million barrels. There are no other commercial disposal well operators in the area that have complained about any overpressuring issues in the San Andres.

Approval of the requested permit is in the public interest given it is in the public interest to promote the development of the Wolfberry vertical play and Wolfcamp horizontal play in Glasscock County. There is ever-increasing demand for disposal in the area. The Protestant agreed there is a need for additional disposal capacity in the area. Maverick has verbal contracts with Apache to dispose of 5,000 to 7,500 BWPD of produced lease water through flow lines. Rogers Construction and Trucking will send another 5,000 to 7,500 BWPD of produced frac water as a result of Apache's aggressive drilling program in Glasscock County. Currently, at times, there are trucks parked outside disposal facilities with as many as twelve waiting to unload. The longer a truck waits to unload, the higher disposal costs of water will be. The Sherrod SWD disposal well will reduce truck miles driven and reduce truck waiting times at area disposal wells. Drilling is increasing in the Wolfberry and Wolfcamp plays which require large, multi-stage fracs to extract the oil. Having an additional disposal facility close to the Wolfberry and Wolfcamp wells will increase competition and reduce disposal costs. The evidence demonstrates that the operation of the subject disposal well and facility will not adversely impact any surface or subsurface useable quality water, the San Andres is not over pressured and will not negatively impact MTN Energy's Schwartz SWD No.1.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing. Notice of the application was published in the *Big Spring Herald*, a newspaper of general circulation in Howard, Glasscock, Martin and Dawson Counties, on December 2, 2012. A copy of the application was mailed on September 27, 2012 to the Glasscock County Clerk's Office and the offsetting surface owners and operators within ½ mile of the proposed well.
2. The Sherrod SWD No. 1 is a plugged dry hole that Maverick Disposal, L.L.C. plans to reenter to a maximum depth of approximately 5,050 feet and recompleate into a saltwater disposal well. The top of the San Andres is expected to occur at approximately 3,540 feet.
3. The maximum requested injection volume is 20,000 barrels of water per day and the maximum requested surface injection pressure is 1,770 psi. The requested disposal interval is the San Andres formation between approximately 3,540 and 4,746 feet.
4. The Sherrod SWD No. 1 will be cased and cemented in a manner to protect usable quality water and injection will be confined to the injection interval.
 - a. The subject well has 400 feet of 13³/₈" surface casing cemented to surface.
 - b. The subject well has 2,946 feet of 8⁵/₈" intermediate string casing cemented to surface.

- c. The subject well will have approximately 5,050 feet of 5½" casing, cemented to the surface with 860 sacks of cement.
 - d. Injection will be through tubing set on a packer no higher than 100 feet above the top of the injection interval.
 - e. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 375 feet in the area of the proposed well.
5. There are no wellbores within ¼ mile of the proposed disposal well. There is a permitted drilling location for the BTA Oil Producers, LLC 9703 JV-P Hightower Well No. 6. The drilling permit is scheduled to expire on June 28, 2014.
6. The application was declared administratively complete by Doug Johnson, Manager for Injection of the Storage Permits and Support Section of the Commission on December 19, 2012.
7. MTN Energy is protesting Maverick's use of the San Andres formation as a disposal formation as it believes the San Andres is over pressured.
8. MTN Energy operates the Schwartz SWD No.1 as commercial disposal well which is located 4,943 feet from Maverick's Sherrod SWD No. 1.
9. The San Andres formation is an expansive formation that is found throughout the Permian Basin in West Texas. The San Andres extends into New Mexico and is considered an infinite-acting, unbounded reservoir.
10. Pressure front calculations performed by Maverick's engineering expert demonstrates the Sherrod SWD No.1 will have minimal impact on MTN Energy's Schwartz SWD No.1.
- a. The expert calculated the current bottom hole pressure is 1,894 psi at the MTN Energy's disposal well's location.
 - b. The expert assumed the San Andres formation is an infinite unbounded reservoir, with 38 md permeability, 11.7% porosity, 400 feet of net reservoir thickness.
 - c. After injecting 20,000 BWPD for 25 years, at the distance to MTN Energy's disposal well, the reservoir pressure is expected to increase by 20 psi.
 - d. The expert made a second calculation assuming a 10% decrease in reservoir permeability at 34 md and a 10% decrease in porosity at 11%. The second calculation shows the proposed well will increase the reservoir pressure by 76 psi at the MTN Energy's disposal well during the same disposal rates and time frame.

11. Water displacement calculations performed by Maverick's engineering expert demonstrates that injection into the Sherrod SWD No.1 will not invade the pore space around MTN Energy's Schwartz SWD No.1.
 - a. The expert assumed the San Andres formation has the same reservoir characteristics of 11.7% porosity, 400 feet of net reservoir thickness.
 - b. The calculation assumes piston like displacement.
 - c. After injecting 20,000 BWPD for 25 years, the invaded distance will be 2,641 feet or ½ mile. The invaded acres will be approximately 503 acres centered around the proposed disposal well.
12. MTN Energy has requested to double it's own authorized disposal volume and this is inconsistent with its claims that the San Andres is an over pressured disposal formation.
 - a. MTN Energy's original permit issued on April 21, 2010 authorized the injection of 10,000 BWPD.
 - b. One month after disposal began, MTN Energy was issued a permit amendment to increase the authorized volume to 20,000 BWPD on March 20, 2012.
 - c. The H-10, Annual Disposal Well Monitoring Report, for the Schwartz SWD No. 1D shows a constant average injection pressure of 1,050 psig and a constant maximum pressure of 1,250 psig from February 2011 through January 2012.
13. Maverick plans to use the proposed well to dispose of produced water and frac water generated as a result of the active and future development of the new Wolfberry vertical play and the Wolfcamp horizontal play in Glasscock County.
14. The Wolfberry vertical play wells combine the thick Spraberry trend interval with the thick Wolfcamp zones. The wells require large, multi-stage fracs that use large quantities of water. The wells later produce the frac water which requires disposal.
15. The Wolfcamp horizontal play in Glasscock County requires the drilling of horizontal laterals in the thick Wolfcamp formation. The horizontal wells require large, multi-stage fracs that use large quantities of water. The wells later produce the frac water which requires disposal.
16. Glasscock County produces nine million barrels of oil annually. Maverick estimates for each barrel of oil produced 5 barrels of water is produced and must be disposed of.

17. Due to increasing development of the Wolfberry and Wolfcamp formations in Glasscock County, the use of the Sherrod SWD No. 1 as a commercial disposal well is in the public interest to promote these developments by providing a safe and economic means of disposal of the fluids associated with drilling and production.
18. MTN Energy agrees there is a need for additional disposal capacity in Glasscock County.
19. MTN Energy has experienced difficulties doubling the volume of water injecting into the San Andres.
 - a. After the amendment was approved on March 20, 2012, MTN increased the size of the surface pumps and surface facilities to handle the increased volume.
 - b. MTN Energy elected to increase the perforations in the well by adding 160 holes over 368 feet within the permitted interval.
 - c. During the recompletion process, MTN encountered problems with injection water flowing back to the surface. The flow back water included oil and is believed to be previously injected water.
 - d. Immediately after the work over, on January 19, 2013, the injection pressure dropped to 320 psi, but when disposal volume was increased to 8,000 BWPD, the pressure increased to 1,200 psi. The Schwartz SWD No. 1 can only inject at a rate of 8,000 BWPD with a surface pressure of 1,200 psig.
20. Other factors could affect MTN Energy's Schwartz SWD No. 1 injectability
 - a. The Schwartz SWD No. 1 has a small tubing size of 2⁷/₈" instead of the more commonly used 3¹/₂" tubing used in high volume commercial disposal wells. A smaller tubing increases fluid friction losses, which increases surface injection pressures to inject fluids.
 - b. MTN admitted it did not recover all of the mud used to work over the well. Mud left in the formation or wellbore can clog pores, reducing the injectability of the formation.
 - c. The flowback water that was identified by the Protestant as water that was previously injected contained oil and mud. Injecting small quantities of oil into the disposal zone could carry fine particles into the formation and cause clogging of the pores which in turn increases surface disposal pressures required to inject fluids.
21. MTN Energy's representative estimated the bottom hole pressure in their well to be 1,972 psi, similar to the estimate calculated by Maverick's expert of 1,894 psi for the well with a normal pressure gradient at a depth 4,075 feet.

22. Maverick Disposal, L.L.C. has an active P-5 on file with the Commission, with \$25,000 financial assurance.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things have occurred to give the Railroad Commission jurisdiction to consider this matter.
3. The use or installation of the proposed injection well is in the public interest.
4. The use or installation of the proposed injection well will not endanger or injure any oil, gas, or other mineral formation.
5. With proper safeguards, as provided by terms and conditions in the attached final order which are incorporated herein by reference, both ground and surface fresh water can be adequately protected from pollution.
6. Maverick Disposal, L.L.C. has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.
7. Maverick Disposal, L.L.C. has met its burden of proof and satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the application be approved as set out in the attached Final Order.

Respectfully submitted,

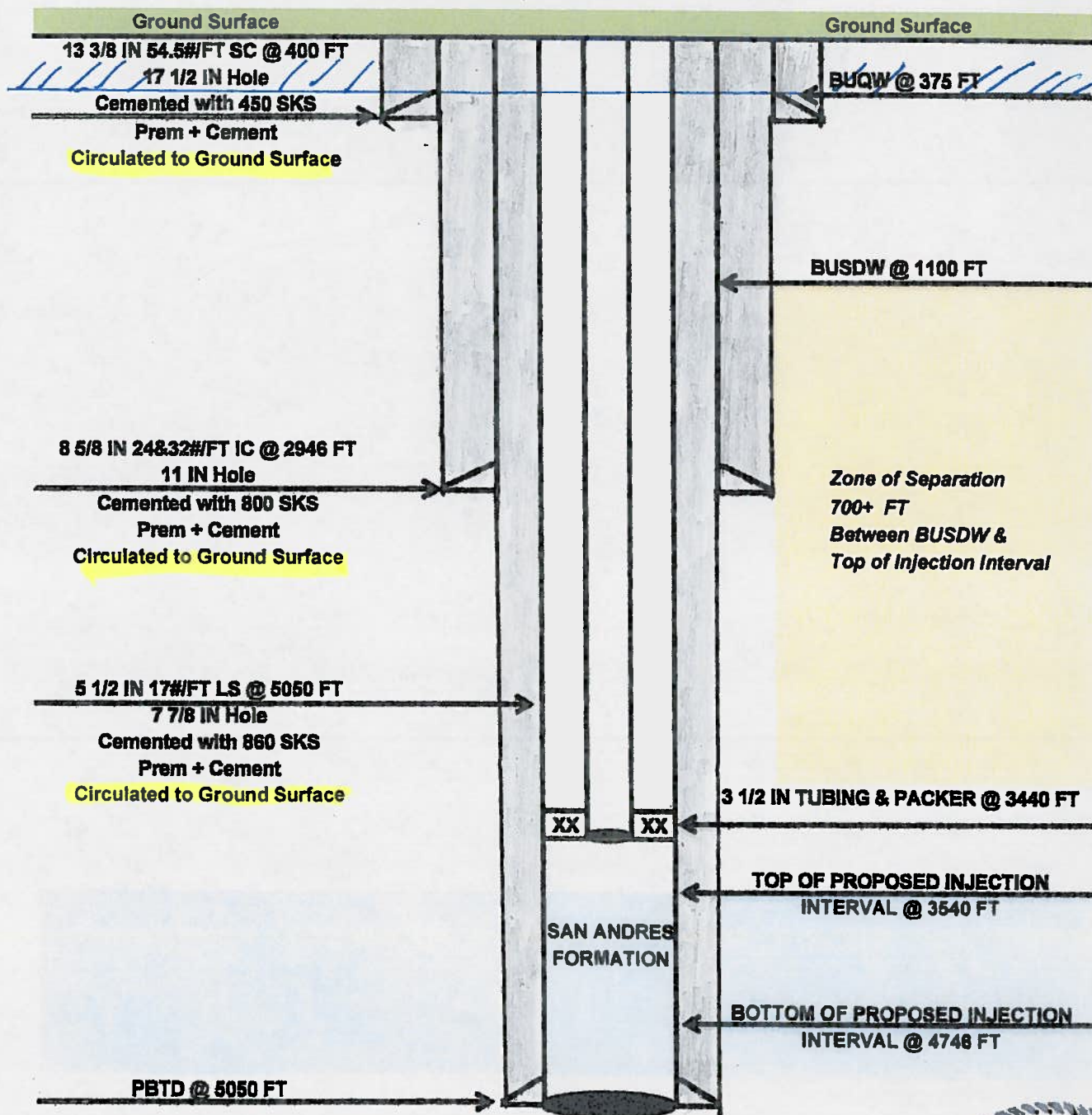


Andres J. Trevino
Technical Examiner



Terry Johnson
Hearings Examiner

**Maverick Disposal, LLC
Sherrod SWD, Well No. 1
Garden City, West (Wolfcamp 7880) Field
Disposal Facility
Proposed Wellbore Configuration**



NOT TO SCALE - FOR VISUAL ONLY

DOCKET NO. : 08-0280231

MAVERICK DISPOSAL, LLC

EXHIBIT NO. 14

LARRY E. CARLISLE, P.E.
FIRM NO. 9708

